

NON-PUBLIC?: N
ACCESSION #: 8907070096
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Callaway Plant Unit 1 PAGE: 1 of 3

DOCKET NUMBER: 05000483

TITLE: Unit/Turbine Trip Due To High Power Startup Flux Rate Trip
EVENT DATE: 05/29/89 LER #: 89-006-00 REPORT DATE: 06/29/89

OPERATING MODE: 1 POWER LEVEL: 197

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: J. F. Hogg - Superintendent of Instrument and Controls
TELEPHONE: 314-676-8193

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

On 5/29/89 at 1051 CDT, a Reactor Trip occurred on a power range neutron flux rate trip signal. The plant was in Mode 1 - Power Operations, at 97 percent reactor power. The Reactor Coolant System (RCS) temperature was 587 degrees F (average). RCS pressure was 2235 psig.

The power flux rate trip signal was received during the performance of a surveillance procedure for incore/excore calibration. A change in meter location of the Measuring & Test Equipment (M&TE) installed for the surveillance was requested by a utility Reactor engineer. The technician removed the leads from the M&TE that was connected to power range channels N41 and N42. When reconnecting, the technician dropped the N42 leads causing a ground. A ground in one of the N41 leads also occurred, which lead to the trip signal and subsequent Unit Trip/Turbine Trip.

This event was caused by the lack of detail provided in plant procedures which resulted in personnel being unaware of potential consequences. Neither the technician nor the Reactor engineer realized the risk associated with the

configuration due to the multiple channel arrangement and non-isolated test points.

Procedure ESP-ZZ-00006 Incore/Excore Calibration has been revised to incorporate specific precautions concerning placement, connection and removal of the M&TE. The event will be discussed with the technicians and engineers involved.

END OF ABSTRACT

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BASIS FOR REPORTABILITY

On 5/29/89 at 1051 CDT, a turbine trip and Reactor Protection System (RPS) 1_/ reactor trip occurred during a surveillance procedure for incore/excore calibration. As a result of the RPS actuation, a Feedwater Isolation (FWIS) and an Auxiliary Feedwater Actuation Signal (AFAS) were generated by design. Since the Engineered Safety Features (ESF) actuations were not part of preplanned sequences during reactor operation or testing, this event is reportable per 10CFR50.73 (a) (2) (iv).

PLANT CONDITIONS AT TIME OF EVENT

Mode 1 - Power Operations

97 percent Reactor Power Reactor Coolant System (RCS) 2_/- temperature (average) - 587 degrees F pressure - 2235 psig

The plant was completing a power ascension from a refueling outage.

DESCRIPTION OF EVENT

On 5/29/89, Measuring & Test Equipment (M&TE) was installed per procedure ESP-ZZ-00006 Incore/Excore Calibration, to power range nuclear instrumentation (NI) cabinets for detectors N41, 42, 43 and 44 3_/. The cabinets are located in the main control room. A change in meter location of the M&TE was requested by the utility reactor engineer after the M&TE was in place. A utility Instrument and Control (I&C) technician removed the leads from the upper detectors of power range channels N41 and N42. When the I&C technician determined he could not reconfigure the leads because the specific hookup had been previously approved and documented, he started to reconnect per the earlier configuration. While reconnecting N41 and N42, the I&C technician dropped the leads for N42 on a metal cart which caused grounding to occur and resulted in a power range neutron flux rate trip signal. N41 also received a power range neutron flux rate trip signal during the reconfiguration at this

time. These two signals resulted in a Unit Trip/Turbine Trip (2 of 4 coincidence). The licensed operators recovered from the reactor trip via plant procedures.

ROOT CAUSE

This event was caused by the lack of detail provided in plant procedures which resulted in personnel being unaware of potential consequences. Plant procedures require the installation of temporary/portable meters (Fluke multimeters) on all four power range channels simultaneously.

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The I&C technician interpreted the request for a change in meter location of the M&TE to encompass switching of the test equipment leads between meters vice the physical movement of the meters without disconnecting the test equipment leads. The I&C technician did not perform a self check to ensure that his intended actions were correct before they were performed. Neither the I&C technician nor the Reactor engineer realized the risk associated with this configuration due to the multiple channel arrangement and the fact that the signals are extracted upstream of the isolation amps.

A contributing factor to this event is that the Fluke multimeters were set on a metal cart. The cart did not have an insulated top which could have prevented grounding.

CORRECTIVE ACTIONS

Procedure ESP-ZZ-00006 has been revised to incorporate specific precautions concerning placement, connection and removal of the meters. This revision requires the use of non-conductive surfaces. Also included is a caution on resetting rate trips and a reminder of the trip potential. The procedure also requires that only one channel be connected at a time and that test leads be connected to the meter before being connected to the cabinet.

This event will be discussed with engineers and I&C technicians involved to re-emphasize that the Nuclear Instrumentation System (NIS) power range current meters are not isolated from solid state protection.

The I&C technician will review the event with his peers with emphasis on the removal of test leads from plant equipment prior to removal from the M&TE.

SAFETY SIGNIFICANCE

This event was not the result of a valid challenge to the RPS. The RPS and ESF systems performed as required. There were no detrimental effects on

plant equipment as a result of the actuations and this event posed no threat to the health and safety of the public.

PREVIOUS OCCURRENCES

None

FOOTNOTES

The system and component code listed below are from IEEE Standards 805-1984 and 803A-1984, respectively.

1_ / System - JC

2_ / System - AB

3_ / System - IG- Component - DET

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UNION
ELECTRIC

Callaway Plant
June 28, 1989

U. S. Nuclear Regulatory Commission
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ULNRC-2026

Gentlemen:

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30

LICENSEE EVENT REPORT 89-006-00
UNIT/TURBINE TRIP DUE TO
HIGH POWER STARTUP FLUX RATE TRIP

The enclosed Licensee Event Report is submitted pursuant to 10 CFR 50.73(a) (2) (iv) concerning an unplanned Unit/Turbine trip which occurred during the performance of an Incore/Excore calibration.

D. Blosser
Manager, Callaway Plant

TPS/LAM:Jew

Enclosure

cc: Distribution attached

MAILING ADDRESS P. O. Box 620, Fulton, MO 65251

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